

PATENT APPLICATION

- a. rapidly capturing power from a continuously running low horsepower internal combustion engine to charge a fast charge-discharge battery without loss of said power; and,
- b. providing instant powerful acceleration while in the cruise mode when the speed of the vehicle is dropping.

56. A method of operating a hybrid motor vehicle having electric motor and internal combustion engine power comprising:

- a. operating the internal combustion engine within a small range of speeds about its most efficient operating speed from a power and pollutant output standpoint; and,
- b. utilizing the internal combustion engine to charge a fast charge-discharge battery when the internal combustion engine is not employed to drive the motor vehicle.

57. In the method of operating a hybrid motor vehicle having internal combustion engine power and electric motor power:

- a. utilizing the internal combustion engine power in the cruise mode and utilizing the electric motor power primarily when conditions for cruise mode operations are not satisfied, the cruise mode occurring when rapidly shifting power and speed demands are not occurring.

58. A method of operating a hybrid motor vehicle having an electric motor power and an internal combustion engine comprising:

- a. utilizing an internal combustion engine having a horsepower approximately 20 to 30 percent of the horsepower of an equivalent weight internal combustion only powered vehicle; and,
- b. operating said internal combustion engine at relatively constant speed and load demands in the cruise mode.

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59. In combination in the method of operating a hybrid vehicle having an electric motor and an internal combustion engine:

- a. causing a fast charge-discharge battery to power the electric motor upon throttle demand; and,
- b. transferring power output into electric power conserved in a fast charge-discharge battery when the internal combustion engine continues to run.

60. A method of operating a hybrid motor vehicle having an electric motor and an internal combustion engine comprising:

controlling operation of the hybrid vehicle in the cruise mode including controlling the operation of the electric motor and internal combustion engine in response to vehicle operating parameters.

REMARKS

First off, it should be noted that on Page 3 of the Office Letter, claims 42 to 44 are referenced in the rejection at paragraph 2. Said claims were previously canceled without prejudice.

Also, it should be noticed that claim 53 contains a system definition agreed upon as allowable at an interview held on November 11, 1999. The present rejection of this claim is not understood since the reference Ellers patent No. 4,923,025 was already of record in the application.

PARAGRAPH 2 OF THE OFFICE LETTER

Claims 34,35,37,40 & 50-54 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ellers (of record).

There is a major deficiency in the control system and charging design of Ellers which cannot be corrected. Column 4 beginning at line 67 of Ellers states: